



SEQUENCE LISTING

<110> Zang, Jingwu Z.

Ho, Walter Kowk Keung

Zhang, Dongqing

Sun, Wei

<120> T Cell Receptor CDR3 Sequence and Methods for
Detecting and Treating Rheumatoid Arthritis

<130> D6622

<140> US 10/612,468

<141> 2003-07-02

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<221> CDS

<223> part of the complementary determining region-3 (CDR3)
in the V(16 family (BV16 gene) of T cell receptors
(TCR) in patients with rheumatoid arthritis (RA)

<400> 1

agccaagctg acgggaccca t

21

<210> 2

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<223> part of the complementary determining region-3
(CDR3) in the V(14 family (BV14 gene) of TCR in
patients with RA

<400> 2

agttccgggg gcagtctgtt c

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<212> PRT
<213> *Homo sapiens*

<220>
<221> PEPTIDE
<223> conserved amino acid sequence derived from CDR3 of TCR beta-chain BV16 in patients with RA

<400> 3
Ser Gln Ala Asp Gly Thr His
1 5

<210> 4
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<212> PRT
<213> *Homo sapiens*

<220>
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<223> conserved amino acid sequence derived from CDR3 of TCR beta-chain BV14 in patients with RA

<400> 4
Ser Ser Gly Gly Ser Leu Phe
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<210> 6
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<213> *Homo sapiens*

<220>
<221> DOMAIN

<223> amino acid sequence of human (beta-chain variable
region V(14 of T cell receptors

<400> 6

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| Met | Gly | Pro | Gln | Leu | Leu | Gly | Tyr | Val | Val | Leu | Cys | Leu | Leu | Gly |
| 1 | | | | 5 | | | | 10 | | | | | | 15 |
| Ala | Gly | Pro | Leu | Glu | Ala | Gln | Val | Thr | Gln | Asn | Pro | Arg | Tyr | Leu |
| | | | | 20 | | | | 25 | | | | | | 30 |
| Ile | Thr | Val | Thr | Gly | Lys | Lys | Leu | Thr | Val | Thr | Cys | Ser | Gln | Asn |
| | | | | 35 | | | | 40 | | | | | | 45 |
| Met | Asn | His | Glu | Tyr | Met | Ser | Trp | Tyr | Arg | Gln | Asp | Pro | Gly | Leu |
| | | | | 50 | | | | 55 | | | | | | 60 |
| Gly | Leu | Arg | Gln | Ile | Tyr | Tyr | Ser | Met | Asn | Val | Glu | Val | Thr | Asp |
| | | | | 65 | | | | 70 | | | | | | 75 |
| Lys | Gly | Asp | Val | Pro | Glu | Gly | Tyr | Lys | Val | Ser | Arg | Lys | Glu | Lys |
| | | | | 80 | | | | 85 | | | | | | 90 |
| Arg | Asn | Phe | Pro | Leu | Ile | Leu | Glu | Ser | Pro | Ser | Pro | Asn | Gln | Thr |
| | | | | 95 | | | | 100 | | | | | | 105 |
| Ser | Leu | Tyr | Phe | Cys | Ala | Ser | Ser | | | | | | | |
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<213> *Homo sapiens*

<220>

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region V(16 of T cell receptors

<400> 7

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| Ile | Glu | Ala | Gly | Val | Thr | Gln | Phe | Pro | Ser | His | Ser | Val | Ile | Glu |
| 1 | | | | 5 | | | | 10 | | | | | | 15 |
| Lys | Gly | Gln | Thr | Val | Thr | Leu | Arg | Cys | Asp | Pro | Ile | Ser | Gly | His |
| | | | | 20 | | | | 25 | | | | | | 30 |
| Asp | Asn | Leu | Tyr | Trp | Tyr | Arg | Arg | Val | Met | Gly | Lys | Glu | Ile | Lys |
| | | | | 35 | | | | 40 | | | | | | 45 |
| Phe | Leu | Leu | His | Phe | Val | Lys | Glu | Ser | Lys | Gln | Asp | Glu | Ser | Gly |
| | | | | 50 | | | | 55 | | | | | | 60 |
| Met | Pro | Asn | Asn | Arg | Phe | Leu | Ala | Glu | Arg | Thr | Gly | Gly | Thr | Tyr |
| | | | | 65 | | | | 70 | | | | | | 75 |
| Ser | Thr | Leu | Lys | Val | Gln | Pro | Ala | Glu | Leu | Glu | Asp | Ser | Gly | Val |
| | | | | 80 | | | | 85 | | | | | | 90 |
| Tyr | Phe | Cys | Ala | Ser | Ser | | | | | | | | | |
| | | | | 95 | | | | | | | | | | |

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<400> 9
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<210> 10
<211> 23
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<210> 11
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<210> 12
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<220>
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<400> 12
tcgagatatc tagtcaaaag gacg 24

<210> 13
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<220>
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<400> 13
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<210> 14
<211> 22
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<210> 15
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<400> 15
ttcagggctc atgttgctca c 21

<210> 16
<211> 21
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<220>
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<210> 17
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<213> Artificial Sequence

<220>
<223> reverse primer specific for TCR BV5 used in real-time PCR analysis

<400> 17
agcaccaagg cgctcacatt ca 22

<210> 18
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<220>
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ctcaggtgtg atccaaatttc a 21

<210> 19
<211> 21
<212> DNA
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<220>
<223> reverse primer specific for TCR BV6 used in real-time

PCR analysis

<400> 19
cccccgctct gtgcgctggta t 21

<210> 20
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<220>
<223> forward primer specific for TCR BV7 used in real-time PCR analysis

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catggaaatg acaaataaga agtct 25

<210> 21
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<220>
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tggctgcagg gcgtgttaggt g 21

<210> 22
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ccccgccatg aggtgacaga g 21

<210> 23
<211> 21
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<220>
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PCR analysis

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gagtcctcgg gttctgaggg c 21

<210> 24
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<220>
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PCR analysis

<400> 24
ccaaaataacc tggtcacaca g 21

<210> 25
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<220>
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PCR analysis

<400> 25
ccaggaaatt gatgtgaaga tt 22

<210> 26
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<220>
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PCR analysis

<400> 26
accttagactt ctggtaaaag ca 22

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PCR analysis

<400> 27
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<220>
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PCR analysis

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<210> 29
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PCR analysis

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atgtgagggc ctggcagact c 21

<210> 30
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<220>
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PCR analysis

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<210> 31
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<400> 31
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tgaagacagg acagagcatg aca 23

<210> 33
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<210> 34
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<223> forward primer specific for TCR BV14 used in real-time PCR analysis

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acccaagata cctcatcaca gtg 23

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gttccccagc cacagcgtaa ta 22

<210> 39
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<210> 40
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<213> Artificial Sequence

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<400> 40
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<210> 41
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<210> 42
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agacacacctgg tcaggaggag g 21

<210> 43
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<210> 44
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<210> 46
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<400> 46
gaccctggtg cagcctgtg 19

<210> 47
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<220>
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<400> 47
gaggaggaggc ttcttagaac t 21

<210> 48
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<220>
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cccagatata agattacaga gaaa 24

<210> 49
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<212> DNA
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<220>
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<400> 49
ctggatcttg agagtggagt c 21

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cacagatggg acaggaagtg atc 23

<210> 51
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gtcctccagc tttgtggacc g 21

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<210> 53
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<220>
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<400> 53
cagctccaag gagctcatgt t 21

<210> 54
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<220>
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PCR analysis

<400> 54
ccaagataacc aggttaccca gttt 24

<210> 55
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<223> reverse primer specific for TCR BV24 used in real-time PCR analysis

<400> 55
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<210> 56
<211> 22
<212> DNA
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<220>
<223> forward primer specific for TCR BV25 used in real-time PCR analysis

<400> 56
aaaacatctt gtcagagggg aa 22

<210> 57
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> reverse primer specific for TCR BV25 used in real-time PCR analysis

<400> 57
tgaatcctca agttcgtag c 21

<210> 58
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> forward primer specific for TCR BC used in real-time PCR analysis

<400> 58
cagcgccctt gtgttgatg 19

<210> 59
<211> 20
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<213> Artificial Sequence

<220>
<223> reverse primer specific for TCR BC used in real-time PCR analysis

<400> 59
aagcgctggc aaaagaagaa 20

<210> 60
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<212> DNA
<213> Artificial Sequence

<220>
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<210> 61
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> FAM (expand)-labeled BC primer used for run-off reactions

<400> 61
cacagcgacc tcgggtggg 19

<210> 62
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
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<400> 62
actgtgagtc tggtgcccttg t 21

<210> 63
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> FAM (expand)-labeled BJ primer used for run-off reactions

<400> 63
acaacggta acttggtccc cgaa 24

<210> 64
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> FAM (expand)-labeled BJ primer used for run-off reactions

<400> 64
ggtcctctac aacagtgagc caac 24

<210> 65
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> FAM (expand)-labeled BJ primer used for run-off reactions

<400> 65
aagagagaga gctgggttcc actg 24

<210> 66
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
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| <210> 67 | |
| <211> 24 | |
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| <220> | |
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| <210> 68 | |
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| <212> DNA | |
| <213> Artificial Sequence | |
| <220> | |
| <223> FAM (expand)-labeled BJ primer used for run-off reactions | |
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| cctggcccgaa agaactgctc a | 21 |
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| <211> 24 | |
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| <210> 70 | |
| <211> 21 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| <220> | |
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| <400> 70 | |
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<210> 71
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<210> 72
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<400> 72
tcgagcacca ggagccgc 18

<210> 73
<211> 21
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<213> Artificial Sequence

<220>
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<400> 73
ctgctgccgg ccccgaaagt c 21

<210> 74
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<400> 74
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<210> 75
<211> 20
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<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV16 clonotype derived
from ST specimen of RA patients

<400> 75

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1 5 10 15
Phe Phe Gly Pro Gly
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<210> 76

<211> 60

<212> DNA

<213> Artificial Sequence

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<223> CDR3 nucleic acid sequence of BV16 clonotype derived
from ST specimen of RA patients

<400> 76

tatttctgtg ccagcagcca agatagcggg gggggaggta agcagttctt 50
cgggccagga 60

<210> 77

<211> 20

<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV16 clonotype derived
from ST specimen of RA patients

<400> 77

Tyr Phe Cys Ala Ser Ser Arg Leu Gly Gln Gly Tyr Asn Glu Gln
1 5 10 15
Phe Phe Gly Pro Gly
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<210> 78

<211> 60

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<223> CDR3 nucleic acid sequence of BV16 clonotype derived from ST specimen of RA patients

<400> 78
tatttctgtg ccagcagccg actggacag ggctacaatg agcagttctt 50
cgggccagga 60

<210> 79
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<213> *Homo sapiens*

<220>
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<223> CDR3 amino acid sequence of BV16 clonotype derived from ST specimen of RA patient

<400> 79
Tyr Phe Cys Ala Ser Ser Gln Asp Leu Asp Ser Tyr Asn Glu Gln
1 5 10 15
Phe Phe Gly Pro Gly
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<210> 80
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
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<223> CDR3 nucleic acid sequence of BV16 clonotype derived from ST specimen of RA patients

<400> 80
tatttctgtg ccagcagcca agatctggac agctacaatg agcagttctt 50
cgggccagga 60

<210> 81
<211> 20
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN

<223> CDR3 amino acid sequence of BV16 clonotype derived
from ST specimen of RA patient

<400> 81
Tyr Phe Cys Ala Ser Ser Gln Gly Thr Ser Gly Ile Thr Glu Gln
1 5 10 15
Phe Phe Gly Pro Gly
20

<210> 82
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
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<223> CDR3 nucleic acid sequence of BV16 clonotype derived
from ST specimen of RA patients

<400> 82
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cgggccagga 60

<210> 83
<211> 20
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV16 clonotype derived
from ST specimen of RA patient

<400> 83
Tyr Phe Cys Ala Ser Ser Gln Leu Ala Gly Pro Tyr Asn Glu Gln
1 5 10 15
Phe Phe Gly Pro Gly
20

<210> 84
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<221> CDS

<223> CDR3 nucleic acid sequence of BV16 clonotype derived from ST specimen of RA patients

<400> 84

tatttctgtg ccagcagcca gctagcggga ccctacaatg agcagttctt 50
cgggccagga 60

<210> 85

<211> 20

<212> PRT

<213> *Homo sapiens*

<220>

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<223> CDR3 amino acid sequence of BV16 clonotype derived from ST specimen of RA patient

<400> 85

Tyr Phe Cys Ala Ser Ser Leu Leu Gly Thr Val Ser Tyr Glu Gln
1 5 10 15
Phe Phe Gly Pro Gly
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<210> 86

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

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<223> CDR3 nucleic acid sequence of BV16 clonotype derived from ST specimen of RA patients

<400> 86

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cgggccaggc 60

<210> 87

<211> 20

<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV16 clonotype derived from ST specimen of RA patient

<400> 87
Tyr Phe Cys Ala Ser Pro Leu Gly Thr Ala Leu Ser Tyr Glu Gln
1 5 10 15
Phe Phe Gly Pro Gly
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<210> 88
<211> 60
<212> DNA
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<220>
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<223> CDR3 nucleic acid sequence of BV16 clonotype derived
from ST specimen of RA patients

<400> 88
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cgggcgggc 60

<210> 89
<211> 20
<212> PRT
<213> *Homo sapiens*

<220>
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<223> CDR3 amino acid sequence of BV16 clonotype derived
from ST specimen of RA patient

<400> 89
Tyr Phe Cys Ala Ser Ser Gln Ala Asp Gly Thr His Tyr Glu Gln
1 5 10 15
Phe Phe Gly Pro Gly
20

<210> 90
<211> 60
<212> DNA
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<220>
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from ST specimen of RA patients

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cgggccgggc 60

<210> 91
<211> 20
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV16 clonotype derived from ST specimen of RA patient

<400> 91
Tyr Phe Cys Ala Ser Ser Gln Asp Lys Gly His Phe Tyr Glu Gln
1 5 10 15
Phe Phe Gly Pro Gly
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<210> 92
<211> 60
<212> DNA
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<220>
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<400> 92
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cgggccgggc 60

<210> 93
<211> 20
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV16 clonotype derived from ST specimen of RA patient

<400> 93
Tyr Phe Cys Ala Ser Ser Gln Ala Asp Gly Thr His Tyr Glu Gln
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Phe Phe Gly Pro Gly
20

<210> 94
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
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<223> CDR3 nucleic acid sequence of BV16 clonotype derived
from ST specimen of RA patients

<400> 94
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cgggcccgggc 60

<210> 95
<211> 20
<212> PRT
<213> *Homo sapiens*

<220>
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<223> CDR3 amino acid sequence of BV16 clonotype derived
from ST specimen of RA patient

<400> 95
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` 5 10 15
Phe Phe Gly Pro Gly
20

<210> 96
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
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<223> CDR3 nucleic acid sequence of BV16 clonotype derived
from ST specimen of RA patients

<400> 96
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cgggcccgggc 60

<210> 97

<211> 20

<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV16 clonotype derived
from ST specimen of RA patient

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1 5 10 15
Phe Phe Gly Pro Gly
20

<210> 98

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<223> CDR3 nucleic acid sequence of BV16 clonotype derived
from ST specimen of RA patients

<400> 98

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cgggccgggc 60

<210> 99

<211> 18

<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV16 clonotype derived
from ST specimen of RA patient

<400> 99

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1 5 10 15
Gly Gln Gly

<210> 100

<211> 54

<212> DNA
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<220>
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<223> CDR3 nucleic acid sequence of BV16 clonotype derived from ST specimen of RA patients

<400> 100
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aggc 54

<210> 101
<211> 18
<212> PRT
<213> *Homo sapiens*

<220>
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<400> 101
Tyr Phe Cys Ala Ser Arg Ala Ser Arg Tyr Thr Glu Ala Phe Phe
1 5 10 15
Gly Gln Gly

<210> 102
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
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<223> CDR3 nucleic acid sequence of BV16 clonotype derived from ST specimen of RA patients

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aggc 54

<210> 103
<211> 18
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV16 clonotype derived
from ST specimen of RA patient

<400> 103
Tyr Phe Cys Ala Ser Arg Ala Ser Arg Tyr Thr Glu Ala Phe Phe
1 5 10 15
Gly Gln Gly

<210> 104
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
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from ST specimen of RA patients

<400> 104
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aggc 54

<210> 105
<211> 18
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV16 clonotype derived
from ST specimen of RA patient

<400> 105
Tyr Phe Cys Ala Ser Ser Thr Gly Val Asn Thr Glu Ala Phe Phe
1 5 10 15
Gly Gln Gly

<210> 106
<211> 54
<212> DNA
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<220>
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<223> CDR3 nucleic acid sequence of BV16 clonotype derived

from ST specimen of RA patients

<400> 106

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aggc 54

<210> 107

<211> 18

<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV16 clonotype derived
from ST specimen of RA patient

<400> 107

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1 5 10 15
Gly Gln Gly

<210> 108

<211> 54

<212> DNA

<213> Artificial Sequence

<220>

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<223> CDR3 nucleic acid sequence of BV16 clonotype derived
from ST specimen of RA patients

<400> 108

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aggc 54

<210> 109

<211> 18

<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV16 clonotype derived
from ST specimen of RA patient

<400> 109
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1 5 10 15
Gly Gln Gly

<210> 110
<211> 54
<212> DNA
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<220>
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from ST specimen of RA patients

<400> 110
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aggc 54

<210> 111
<211> 18
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV16 clonotype derived
from ST specimen of RA patient

<400> 111
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1 5 10 15
Gly Gln Gly

<210> 112
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
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<223> CDR3 nucleic acid sequence of BV16 clonotype derived
from ST specimen of RA patients

<400> 112
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aggc 54

<210> 113

<211> 20

<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 113

Tyr Phe Cys Ala Ser Ser Pro Thr Arg Asp Arg Gly Asn Glu Gln
1 5 10 15
Phe Phe Gly Pro Gly
20

<210> 114

<211> 63

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<223> CDR3 nucleic acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 114

tacttctgtg ccagcagtcc cacgcgggac agggaaata atgagcagtt 50
cttcgggcca gga 63

<210> 115

<211> 22

<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 115

Tyr Phe Cys Ala Ser Ser Ser Pro Ile Ala Gly Ser Ser Tyr Asn
1 5 10 15
Glu Gln Phe Phe Gly Pro Gly
20

<210> 116
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
<221> CDS
<223> CDR3 nucleic acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 116
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cttcgggcca gga 63

<210> 117
<211> 20
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 117
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1 5 10 15
Phe Phe Gly Pro Gly
20

<210> 118
<211> 63
<212> DNA
<213> Artificial Sequence

<220>
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<400> 118
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cttcgggcca gga 63

<210> 119
<211> 21
<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 119

Tyr Phe Cys Ala Ser Ser Ser Ser Pro Thr Ser Tyr Asn Glu
1 5 10 15
Gln Phe Phe Gly Pro Gly
20

<210> 120

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<223> CDR3 nucleic acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 120

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cgggccagga 60

<210> 121

<211> 20

<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 121

Tyr Phe Cys Ala Ser Ser Pro Arg Glu Gly Leu Leu Asn Glu Gln
1 5 10 15
Phe Phe Gly Pro Gly
20

<210> 122

<211> 63

<212> DNA

<213> Artificial Sequence

<220>
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<400> 122
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cttcggggcca gga 63

<210> 123
<211> 21
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 123
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1 5 10 15
Gln Phe Phe Gly Pro Gly
20

<210> 124
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
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<223> CDR3 nucleic acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 124
tacttctgtg ccagcagtcc ctggacttagc gggagtggtg agcagttctt 50
cgggccagga 60

<210> 125
<211> 19
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 125
Tyr Phe Cys Ala Ser Ser Leu Arg Thr Arg Phe Tyr Glu Gln Tyr
1 5 10 15
Phe Gly Pro Gly

<210> 126
<211> 57
<212> DNA
<213> Artificial Sequence

<220>
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<223> CDR3 nucleic acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 126
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gccagga 57

<210> 127
<211> 20
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 127
Tyr Phe Cys Ala Ser Ser Leu Thr Ser Gly Arg Gln Tyr Glu Gln
1 5 10 15
Tyr Phe Gly Pro Gly
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<210> 128
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
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<223> CDR3 nucleic acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 128
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cgggccagga 60

<210> 129

<211> 20

<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 129

Tyr Phe Cys Ala Ser Ser Ser Gly Gly Ser Leu Phe Tyr Glu Gln
1 5 10 15
Tyr Phe Gly Pro Gly
20

<210> 130

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

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from ST specimen of RA patients

<400> 130

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cgggccagga 60

<210> 131

<211> 20

<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 131
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1 5 10 15
Tyr Phe Gly Pro Gly
20

<210> 132
<211> 60
<212> DNA
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<220>
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from ST specimen of RA patients

<400> 132
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cgggccagga 60

<210> 133
<211> 20
<212> PRT
<213> *Homo sapiens*

<220>
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from ST specimen of RA patients

<400> 133
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1 5 10 15
Tyr Phe Gly Pro Gly
20

<210> 134
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
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from ST specimen of RA patients

<400> 134
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cgggccagga 60

<210> 135
<211> 20
<212> PRT
<213> *Homo sapiens*

<220>
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<223> CDR3 amino acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 135
Tyr Phe Cys Ala Ser Ser Pro Ser Ile Ser Ser His Tyr Glu Gln
1 5 10 15
Tyr Phe Gly Pro Gly
20

<210> 136
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
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<400> 136
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cgggccagga 60

<210> 137
<211> 19
<212> PRT
<213> *Homo sapiens*

<220>
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<223> CDR3 amino acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 137
Tyr Phe Cys Ala Ser Ser Arg Asp Gly Val Ser Tyr Glu Gln Tyr
1 5 10 15
Phe Gly Pro Gly

<210> 138
<211> 57
<212> DNA
<213> Artificial Sequence

<220>
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<223> CDR3 nucleic acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 138
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gccagga 57

<210> 139
<211> 19
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 139
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1 5 10 15
Phe Gly Pro Gly

<210> 140
<211> 57
<212> DNA
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<220>
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<223> CDR3 nucleic acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 140
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gccgggc 57

<210> 141
<211> 20
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 141
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1 5 10 15
Tyr Phe Gly Pro Gly
20

<210> 142
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<221> CDS
<223> CDR3 nucleic acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 142
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cgggccagga 60

<210> 143
<211> 20
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 143
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1 5 10 15
Tyr Phe Gly Pro Gly
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<210> 144
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<221> CDS
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<400> 144
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cgggccagga 60

<210> 145
<211> 20
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 145
Tyr Phe Cys Ala Ser Ser Phe Gly Thr Val Leu Ser Tyr Glu Gln
1 5 10 15
Tyr Phe Gly Pro Gly
20

<210> 146
<211> 60
<212> DNA
<213> Artificial Sequence

<220>
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<400> 146
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cgggccagga 60

<210> 147
<211> 20
<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 147

Tyr Phe Cys Ala Ser Ser Pro Arg Leu Ala Gly Asp Lys Glu Gln
1 5 10 15

Tyr Phe Gly Pro Gly
20

<210> 148

<211> 61

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<223> CDR3 nucleic acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 148

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tcggggccggg c 61

<210> 149

<211> 20

<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 149

Tyr Phe Cys Ala Ser Ser Leu Ser Ala Arg Thr Thr Tyr Glu Gln
1 5 10 15

Tyr Phe Gly Pro Gly
20

<210> 150

<211> 60

<212> DNA

<213> Artificial Sequence

<220>
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<400> 150
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cgggccagga 60

<210> 151
<211> 19
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 151
Tyr Phe Cys Ala Ser Ser Leu Ile Gly Gly Asn Glu Lys Leu Phe
1 5 10 15
Leu Gly Ser Gly

<210> 152
<211> 57
<212> DNA
<213> Artificial Sequence

<220>
<221> CDS
<223> CDR3 nucleic acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 152
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cagtggaa 57

<210> 153
<211> 18
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV14 clonotype derived

from ST specimen of RA patients

<400> 153

Tyr Phe Cys Ala Ser Ser Leu Ser Gln Glu Thr Glu Ala Phe Phe
1 5 10 15
Gly Gln Gly

<210> 154

<211> 53

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<223> CDR3 nucleic acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 154

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ggc 53

<210> 155

<211> 19

<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 155

Tyr Phe Cys Ala Ser Arg Ala Gly Thr Gly Phe Glu Lys Leu Phe
1 5 10 15

Phe Gly Ser Gly

<210> 156

<211> 54

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<223> CDR3 nucleic acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 156
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tgga 54

<210> 157
<211> 18
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 157
Tyr Phe Cys Ala Ser Ser Leu Ser Gln Asn Thr Glu Ala Phe Phe
1 5 10 15
Gly Gln Gly

<210> 158
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<221> CDS
<223> CDR3 nucleic acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 158
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aggc 54

<210> 159
<211> 18
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 159
Tyr Phe Cys Ala Ser Ser Pro Arg Val Asn Thr Glu Ala Phe Phe
1 5 10 15
Gly Gln Gly

<210> 160
<211> 53
<212> DNA
<213> Artificial Sequence

<220>
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<400> 160
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ggc 53

<210> 161
<211> 18
<212> PRT
<213> *Homo sapiens*

<220>
<221> DOMAIN
<223> CDR3 amino acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 161
Tyr Phe Cys Ala Ser Ser Leu Ser Gln Glu Thr Glu Ala Phe Phe
1 5 10 15
Gly Gln Gly

<210> 162
<211> 53
<212> DNA
<213> Artificial Sequence

<220>
<221> CDS
<223> CDR3 nucleic acid sequence of BV14 clonotype derived from ST specimen of RA patients

<400> 162
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ggc 53

<210> 163
<211> 18
<212> PRT

<213> *Homo sapiens*

<220>

<221> Domain

<223> CDR3 amino acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 163

Tyr Phe Cys Ala Ser Ser Leu Gly Arg Asn Thr Glu Ala Phe Phe
1 5 10 15
Gly Gln Gly

<210> 164

<211> 54

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<223> CDR3 nucleic acid sequence of BV14 clonotype derived
from ST specimen of RA patients

<400> 164

tacttctgtg ccagcagcct agggaggaac actgaagctt tctttggaca 50
aggc 54

<210> 165

<211> 18

<212> PRT

<213> *Homo sapiens*

<220>

<221> DOMAIN

<223> CDR3 amino acid sequence of BV14 clonotype derived
from ST specimen of RA patients

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